WHAT IS CLAIMED IS:

5

10

20

25

- 1. A fluid control assembly comprising:
- a fluid control film comprising a first side and a second side, the first side comprising a microstructured surface with a plurality of channels on the first side; and

an exterior building wall assembly comprising a substrate layer having a major surface, the substrate major surface associated with the fluid control film.

- 2. The fluid control assembly of claim 1 wherein the substrate major surface is associated with the first side of the fluid control film.
 - 3. The fluid control assembly of claim 1 wherein the substrate major surface is associated with the second side of the fluid control film.
- 15 4. The fluid control assembly of claim 1, where the fluid control film is moisture vapor permeable.
 - 5. The fluid control assembly of claim 1, further comprising a non-woven layer associated with the first side of the fluid control film.
 - 6. The fluid control assembly of claim 1, where the substrate is a sealed insulated panel.
 - 7. The fluid control assembly of claim 1, further comprising adhesive on the on the second side of the fluid control film.
 - 8. The fluid control assembly of claim 7, wherein the adhesive is a continuous layer.
 - 9. The fluid control assembly of claim 7, wherein the adhesive is discontinuous.
- 10. The fluid control assembly of claim 1 wherein the substrate is a frame for a defined opening.

- 11. The fluid control assembly of claim 10 wherein the frame is a window jamb.
- 12. The fluid control assembly of claim 10 wherein the frame is a door jamb.
- 5 13. The fluid control assembly of claim 1 wherein the substrate is a window sill.
 - 14. The fluid control assembly of claim 1 wherein the substrate is wall sheathing.
 - 15. The fluid control assembly of claim 1 wherein the substrate is a window.
 - 16. The fluid control assembly of claim 1 wherein the substrate is a roof.

10

25

- 17. The fluid control assembly of claim 1 wherein the substrate is exterior cladding.
- 15 18. The fluid control assembly of claim 1 wherein the substrate is an exterior protrusion.
 - 19. The fluid control assembly of claim 1 wherein the substrate has an interior side and an exterior side.
- 20 20. The fluid control assembly of claim 1 wherein the fluid control film comprises an antimicrobial additive.
 - 21. The fluid control assembly of claim 1 wherein major surface of the substrate is in a plane parallel to the plane of the wall assembly.
 - 22. The fluid control assembly of claim 1 wherein the major surface of the substrate is in a plane not parallel to the plane of the wall assembly.

23. A method of controlling fluid in a wall assembly comprising

providing an exterior building wall assembly;

providing a fluid control film, the fluid control film comprising a first side and a second side, the first side comprising a microstructured surface with a plurality of channels on the first side; and

affixing the fluid control film to a surface of the wall assembly.

10

5